

ABSTRACT OF THE DISCLOSURE

The invention provides an isolated polypeptide containing the amino acid sequence of SEQ ID NO: 14, 16, 18, 20, 22 or 24. The invention also provides an 5 isolated polypeptide containing a) an amino acid sequence having at least 50% amino acid identity with SEQ ID NO: 10, and b) an amino acid sequence selected from SEQ ID NOS: 14, 16, 18, 20, 22, or 24; or a conservative variant thereof. The invention further provides an isolated 10 polypeptide containing the amino acid sequence of SEQ ID NO: 2, 4, 6, or 8. The invention also provides a method for identifying a compound that modulates a COX-1 variant by contacting an isolated COX-1 variant or a COX-1 variant over-expressed in a genetically engineered cell 15 with a compound and determining the level of an indicator which correlates with modulation of a COX-1 variant, where an alteration in the level of the indicator as compared to a control level indicates that the compound is a compound that modulates the COX-1 variant.